CLAIMS:

1. A method for designing a mold, comprising:

preparing a mold of which molding surface is formed to be a design curved surface in a spherical shape of a molded product;

measuring a curved surface shape of a molded product which is molded from the mold;

comparing a curved surface of the above-described measured molded product and the above-described design curved surface of the above-described molded product and obtaining an error of both the curved surfaces;

specifying information corresponding to the error as correction information for molding a molded product of which curved surface is in a spherical shape; and

correcting a design value of the molding surface of the mold with which a finished molded product with a curved surface in an aspherical shape is molded by using the above-described correction information suited to the molded product having the curved surface in the aspherical surface shape to design the mold.

2. The method for designing a mold according to claim 1, wherein the above-described correction information suited to the molded product having the curved surface in the aspherical shape is correction information of a design curved surface of a molded product in a spherical shape which is of a same lens material as the molded product to be molded of which curved surface is in the aspherical shape, and has a radius of curvature that corresponds to a radius of curvature at the vertex in the design curved surface in the aspherical shape of the above-described molded product, or an average

radius of curvature in an entire surface in the design curved surface in the aspherical shape of the molded product.

3. A method for designing a mold, comprising:

preparing a mold of which molding surface is formed to be a design curved surface in a spherical shape of a molded product;

measuring a curved surface shape of a molded product which is molded from the mold, and specifying a curved surface of the above-described molded product by approximating a measured value by an equation of an aspherical surface;

comparing the curved surface of the above-described molded product which is specified by the equation of the aspherical surface and the above-described design curved surface of the above-described molded product to obtain an error of both the curved surfaces;

compiling information corresponding to the error into database for each of characteristics of the molded product as correction information for molding a molded product of which curved surface is in a spherical shape; and

correcting a design value of a molding surface of a mold with which a finished molded product of which curved surface is in an aspherical shape is molded by using the correction information compiled into database to design the mold.

4. The method for designing a mold according to claim 3, wherein the above-described equation of the aspherical surface is a polynomial including a spherical shape component in the curved surface of the molded product and a component other than the spherical shape in the curved surface of the molded product.

5. The method for designing a mold according to claim 3 or 4, wherein the above-described equation of the aspherical surface adds a spherical shape component in the curved surface of the molded product and a component other than the spherical shape in the curved surface of the molded product.

6. The method for designing a mold according to any one of claims 3 to 5, wherein the above-described equation of the aspherical surface is the following equation (1), where Z is a distance measured from a vertex of the molded product in an axial direction of the molded product, ρ satisfies $\rho^2 = X^2 + Y^2$ when X and Y are distances measured in a perpendicular direction to the above-described axis from the above-described vertex, a vertex curvature C satisfies C=1/R when R is set as a radius of curvature at the vertex, K is a conic coefficient, and A_{2i} is an aspherical coefficient (i is an integer).

[Mathematical Expression 9]

$$Z = \frac{C\rho^2}{1+\sqrt{1-(1+K)C^2\rho^2}} + \sum_{i=2}^{n} A_{2i}\rho^{2i} \qquad \text{——— (1)}$$

7. The method for designing a mold according to claim 6, further comprising:

obtaining the entire shape correction information correcting the entire shape of the molding surface of the mold, which is formed to be the design curved surface in the spherical shape of the molded product, to cope with the error of the spherical shape component in the curved surface of the molded product which is molded, according to a reference spherical component which is a first term (K=0) of the above-described equation (1);

obtaining the local shape correction information correcting a local shape of the above-described molding surface of the above-described mold, which is formed to be the design curved surface in the spherical shape of the molded product, to cope with the error of the component other than the spherical shape in the curved surface of the molded product which is molded, according to a polynomial component which is a second term of the above-described equation (1); and

making each of these kinds of correction information separate and independent and compiling it into database for each of characteristics of the above-described molded product of which design curved surface has the spherical shape.

8. The method for designing a mold according to claim 7, wherein the above-described entire shape correction information is determined based on a difference between a radius of curvature of a reference spherical surface expressed by the reference spherical component which is the first term (K=0) of the equation (1) and a radius of curvature in the design curved surface in the spherical shape of the molded product.

9. The method for designing a mold according to claim 7 or 8, wherein the above-described local shape correction information is determined based on a shape change rate which is expressed by the polynomial component that is the second term of the equation (1), and is calculated by using a height (Z value) of a component other than the spherical shape in the curved surface of the molded product that is molded, and a height (Z value) of the design curved surface in the spherical shape of the above-described molded product, and the above-described shape change rate is compiled into database.

10. The method for designing a mold according to any one of claims 3 to

9, wherein the characteristics of the above-described molded product are a lens material of the optical lens which is the molded product, and a shape of the design curved surface in the spherical shape.

11. The method for designing a mold according to any one of claims 3 to 10, wherein design of the molding surface of the above-described mold with which the finished product of which curved surface is in the aspherical shape is molded is conducted by adding the entire shape correction information and the local shape correction information, which are suited to the molded product having the curved surface in the aspherical shape and compiled into database, to the design curved surface in the aspherical shape of the molded product.

12. The method for designing a mold according to claim 11, wherein the above-described entire shape correction information and the above-described local shape correction information, which are suited to the finished molded product having the curved surface in the aspherical shape and compiled into database, are entire shape correction information and local shape correction information which are compiled into database with respect to a design curved surface of a molded product in a spherical shape, which is of a same lens material as the molded product of which curved surface to be molded is in the aspherical shape and has a radius of curvature corresponding to the average radius of curvature of the design curved surface in the aspherical shape of the above-described molded product.

13. The mold which is formed by carrying out the method for designing a mold according to any one of claims 1 to 12.

14. A molded product, wherein the molded product is formed by using the mold according to claim 13.

15. The molded product according to claim 14, wherein the molded product is a spectacle lens in a meniscus shape.